

Amendments to the Claims

Please replace the existing listing of claims with the following:

1. [Previously Amended] A method of transmitting information in an unsynchronized Orthogonal Frequency Division Multiplexing (OFDM) communication network comprising a plurality of base stations, the method comprising:

modulating access channel information onto a predetermined initial access channel of an OFDM communications signal, wherein the access channel information comprises a common synchronization code that is common to each of the plurality of base stations and a cell-specific synchronization code that is orthogonal to the common synchronization code and unique to each base station, and wherein the initial access channel comprises a predetermined set of one or more time-continuous signal components of the OFDM communications signal, each time-continuous signal component being carried by a respective sub-carrier; and

transmitting the communication signal.

2. [Previously Cancelled]
3. [Previously Amended] The method of claim 1, wherein the common synchronization code comprises a complex PN (pseudo noise) sequence known to communication terminals configured for accessing the communication network.

4. [Previously Cancelled]
5. [Previously Cancelled]
6. [Previously Amended] The method of claim 1, wherein the communication signal further comprises a scattered pilot channel, and wherein the method further comprises modulating a selected one of the common synchronization code and the cell-specific synchronization code to the scattered pilot channel.
7. [Previously Amended] The method of claim 1, wherein each time-continuous signal component of the communication signal is associated with a respective frequency index, and wherein the frequency indexes associated with the time-continuous signal components of the initial access channel are separated by a power of 2.
8. [Previously Cancelled]
9. [Previously Amended] The method of claim 6, wherein the scattered pilot channel is pair-wise scattered onto sub-carriers having a common sub-carrier index in pairs of consecutive OFDM symbols.
10. [Original] The method of claim 1, wherein the access channel information comprises a 3GPP (3rd Generation Partnership Project) PSC (Primary Synchronization Code), a 3GPP SSC (Secondary Synchronization Code) sequence, and a 3GPP primary scrambling code.
11. [Previously Cancelled]

- 12. [Cancelled]
- 13. [Previously Cancelled]
- 14. [Cancelled]
- 15-30. [Cancelled]
- 31. [Previously Cancelled]
- 32. [Previously Cancelled]
- 33. [Cancelled]

34. [Previously Amended] A method of transmitting information in an unsynchronized Orthogonal Frequency Division Multiplexing (OFDM) communication network comprising a plurality of base transceiver stations, the method comprising:

- modulating a cell-specific synchronization code uniquely associated with a selected one of the plurality of base transceiver stations onto a scattered pilot channel of an OFDM communication signal;

- modulating access channel information to a predetermined initial access channel of the OFDM communications signal, wherein the access channel information comprises the cell-specific synchronization code and a common synchronization code that is orthogonal to the cell-specific synchronization code and common to each of the plurality of base transceiver stations, and wherein the initial access channel comprises a

predetermined set of one or more time-continuous signal components of the OFDM communications signal, each time-continuous signal component being carried by a respective sub-carrier; and

transmitting the communication signal

35. [Original] The method of claim 34, further comprising:

receiving the communication signal at a communication terminal;

extracting data from the scattered pilot channel;

searching for the cell-specific synchronization code in the data extracted from the scattered pilot channel; and

performing fine timing and frequency synchronization operations at the communication terminal when the cell-specific synchronization code is found in the data extracted from the scattered pilot channel.

36. [Previously Cancelled]

37. [Previously Amended] The method of claim 34, wherein the common synchronization code comprises a primary synchronization code (PSC) and a secondary synchronization code (SSC), and the cell-specific synchronization code comprises a scrambling code.

38. [Previously Amended] The method of claim 37, wherein the PSC, the SSC and a first portion of the scrambling code are mapped to the initial access channel,

and a second portion of the scrambling code is mapped to the scattered pilot channel.

39. [Previously Amended] The method of claim 37, wherein the PSC is mapped to the initial access channel, and the SSC and the scrambling code are mapped onto the scattered pilot channel.

40. [Previously Cancelled]

41. [Previously Cancelled]

42. [Previously Cancelled]

43. [Previously Amended] A base transceiver station in an unsynchronized Orthogonal Frequency Division Multiplexing (OFDM) communication network comprising a plurality of base transceiver stations, the base transceiver station comprising:

- a. a processor configured to map access channel information to a predetermined initial access channel of an OFDM communications signal, wherein the access channel information comprises a common synchronization code that is common to all of the base transceiver stations in the network and a cell-specific synchronization code that is orthogonal to the common synchronization code and unique to the base transceiver station, and wherein the initial access channel comprises a predetermined set of one or more time-continuous signal components of the OFDM communications signal, each time-continuous signal component being carried by a respective sub-carrier; and

b. an output configured to transmit the communication signal.

44. [Previously Amended] The base transceiver station of claim 43, wherein the output is configured to be connected to at least one antenna.

45. [Previously Amended] A communication terminal comprising:

an input configured to receive an OFDM communication signal; and

a processor configured to search the received signal for predetermined access channel information in an initial access channel corresponding to a predetermined set of one or more time-continuous signal components of the OFDM communications signal, each time-continuous signal component being carried by a respective sub-carrier, and to determine synchronization parameters based on a location of the access channel information in the initial access channel;

wherein the access channel information comprises a common synchronization code that is common to each of the plurality of base stations and a cell-specific synchronization code that is orthogonal to the common synchronization code and unique to each base station.

46. [Previously Amended] The communication terminal of claim 45, further comprising:

- c. a memory for storing the synchronization channel information,
- d. wherein the processor is further configured to retrieve the access channel information from the memory.

47. [Previously Cancelled]